

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

<i>Group</i>		}
<i>Art Unit:</i>	Unknown	}
		}
<i>Attorney</i>		}
<i>Docket No.:</i>	HER0077	}
		}
<i>Applicant:</i>	CLAUDE LAPINTE et al.	}
		}
<i>Invention:</i>	REACTIVE OXYGEN DETECTING AND/OR ABSORBING COMPOUND, METHOD FOR PREPARING SAID COMPOUND AND A DEVICE COMPRISING IT	}
		}
<i>Serial No:</i>	Unknown	}
		}
<i>Filed:</i>	June 15, 2006	
<i>Examiner:</i>	Unknown	

**PRELIMINARY AMENDMENT DELETING
MULTIPLE DEPENDENT CLAIMS**

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Prior to the examination of the above-identified application, please amend the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Reactive oxygen-detecting and/or -absorbing compound, characterised in that it is constituted by a molecular complex which comprises a copper derivative (1)/ligand (2) and which irreversibly changes [colour] color following a variation of the extent of oxidation of the copper and which is connected to the surface of a solid support (3) by means of a covalent bond.

2. (Original) Reactive compound according to claim 1, characterised in that the molecular complex is connected to the surface of the support by means of a derivative (4) of an organic linking chain which comprises, on the one hand, a first function or grafting function which allows it to be fixed to the support and, on the other hand, a second function, or coordination function, which is suitable for bringing about coupling with an associated molecular condensation entity in order to form the ligand which allows the complexing of the copper derivative.

3. (Original) Reactive compound according to claim 2, characterised in that the ligand comprises a heteroatomic chain which may or may not be substituted and which comprises two conjugated imine functional groups and in which at least two atoms of nitrogen, one of which belongs to a pyridine core or the like, are separated by two atoms of carbon.

4. (Original) Reactive compound according to claim 3, characterised in that the coordination function of the organic linking chain is an amine function.

5. (Currently Amended) Reactive compound according to [either claim 3 or claim 4] claim 3, characterised in that the molecular condensation entity is constituted by 2-pyridine carboxaldehyde, or 2-pyridine carboxylic acid or the chloride thereof.

6. (Currently Amended) Reactive compound according to [any one of claims 1 to 5] claim 1, characterised in that the copper derivative is constituted by CuCl, or [Cu(CH₃CN)₄][PF₆].

7. (Currently Amended) Reactive compound according to [any one of claims 1 to 6] claim 1, characterised in that the support is an organic polymer support, such as polystyrene balls or a co-polymer based on polystyrene, and the grafting function of the organic linking chain is an alkene function.

8. (Original) Reactive compound according to claim 7, characterised in that the balls which constitute the support are balls of functional polystyrene which have one or more primary amine functions and/or one or more secondary amine functions.

9. (Currently Amended) Reactive compound according to [any one of claims 1 to 6] claim 1, characterised in that the support is a mineral support, such as balls of a mineral glass, and the grafting function of the organic linking chain is, for example, a trialkoxysilane function, in particular a trimethoxysilane function.

10. (Original) Reactive compound according to claim 9, characterised in that the organic chain is selected from the group formed by 3-aminopropyltrimethoxysilane, N-[3-(trimethoxysilyl)propyl]ethylenediamine and 3-(2-(2-amino)ethylamino)propyl-trimethoxysilane.

11. (Currently Amended) Reactive compound according to [either claim 9 or claim 10] claim 9, characterised in that the support is constituted by an activated metal oxide such as TiO₂, ZrO₂ or preferably SiO₂ or Al₂O₃.

12. (Currently Amended) Method for preparing a reactive compound according to [any one of claims 9 to 11] claim 9, in which the support is a mineral support, characterised in that it comprises the following steps:

-activating the support by means of immersion in an acid solution, washing

operations, then air-drying,

- grafting the organic chain to the activated support by means of immersion in ethanol at ambient temperature,

- synthesis of the ligand in situ by adding the molecular condensation entity to the organic chain previously grafted to the support which may or may not have been activated at ambient temperature and in an ethanol medium, and

- co-ordinating the copper derivative on the ligand by means of immersion in a solution of ethanol at ambient temperature in an inert atmosphere.


13. (Currently Amended) Oxygen-detecting and/or -absorbing device, characterised in that it comprises a reactive compound according to claim 1 [any one of claims 1 to 12].

*** * R E M A R K S * ***

Entry of the present Preliminary Amendment prior to the examination of the application is respectfully requested.

In the event applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, applicant hereby petitions therefore and authorizes that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Respectfully submitted,



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